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Comparative Analysis of Conventional RCC Slab and bubble decks lab in STADD PROSOFTWAEE

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ABSTRACT
Bubble sundeck is the personalized integration fashion of linking air, sword andconcrete in a two- way structural arbor. Concave plastic balls are fitted into the arborand held in place by buttressing sword. The structural geste of the bubble sundeckarbor has been assessed through flexural strength, shear strength, punching shear,anchoring, crack pattern, fire resistance, creep. This system can be used for roof andgroundbottomscrossbeamsalsoitdoesn'tbearshaftsandcolumnheads. Bubblesundeck crossbeams uses concave plastic balls. Bubble sundeck crossbeams havelower cargo carrying capacity compared to the conventional arbor. Slab provides greatthermal comfort and great lifestyle for human beings.Concrete is heavy in weight andmore than 5% of CO2 is created during the manufacturing of cement that goes into it.In this paper we studied that reduction of concrete in slab may be suitable and usefulfor making lightweight and most effective concrete slab after using High densitypolyethylene hollow spheres.Bubble deck is the patented integration technique oflinkingair,steelandconcreteinatwo-waysteel.
plasticballsareinsertedintotheslabandheldinplacebyreinforcingsteel.
deckslabsaremoreeconomicalandefficientwithrespecttostructuralintegritywhilecomparingwithconventional.
Key Words: *Bubbledeck flat slab,Conventionalslab,Hollowplasticballs,Deflection*

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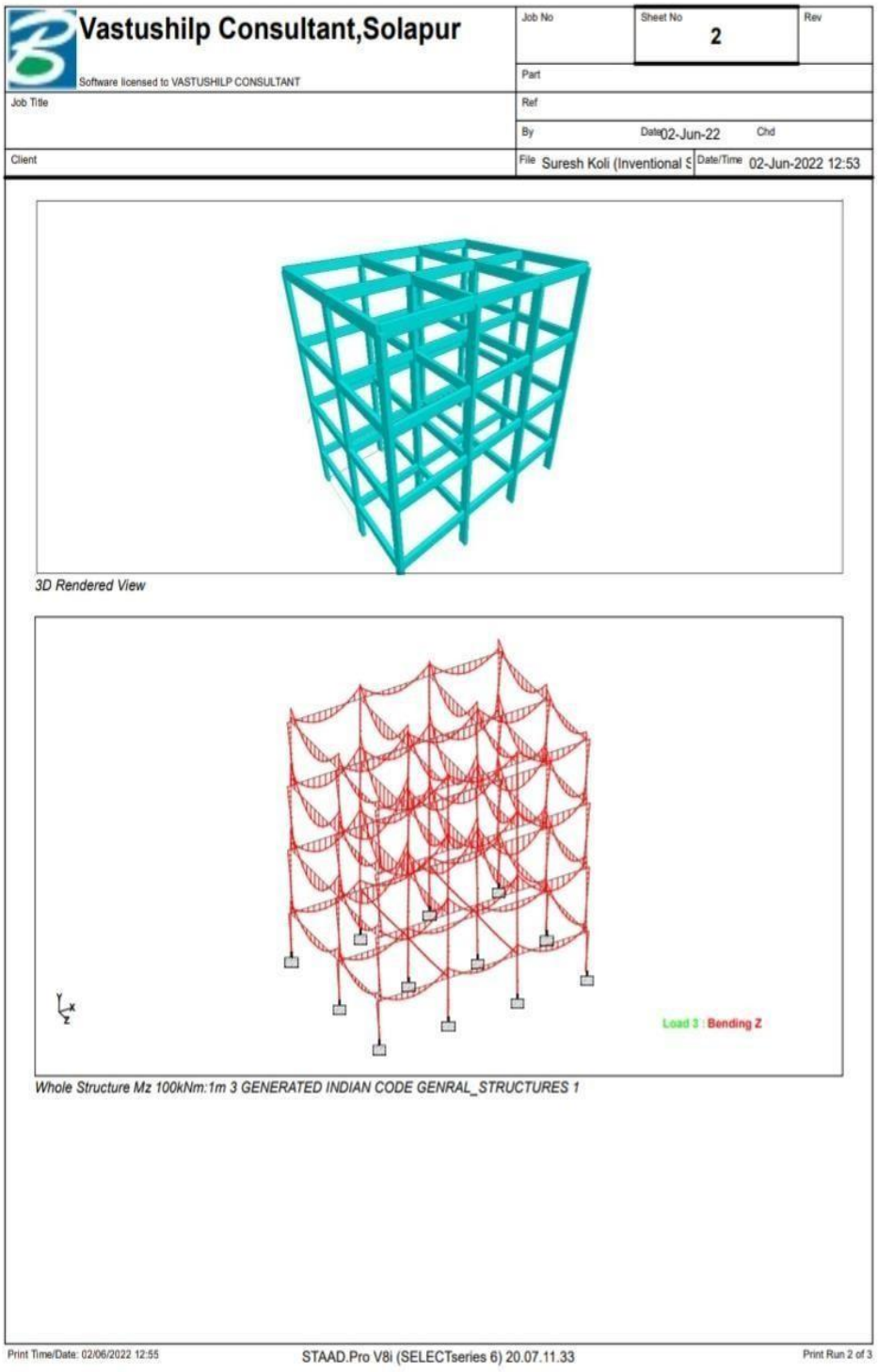
I. INTRODUCTION

Bubble sundeck is a bi axial technology that increases span lengths and makesbottoms thinner by reducing the weight while maintaining the performance ofcorroboratedconcretecrossbeams Aconstructionsystembybarringconcretefromtheneutral axis of a bottom arbor that's structurally not performing, as a resultdramatically reducing in dead weight. Concave bi axial crossbeams, also known as biaxial voided crossbeams, are corroborated concrete crossbeams in which voids allowto reduce the quantum(volume) of concrete. The main disadvantage of concreteconstructions, in case of vertical crossbeams, is the high weight which limits the span.For this reason, introductory exploration in the field of corroborated concretestructures have concentrated on enhancing the span, either by reducing the weight orprostrating concrete's natural weakness in pressure. Due to the prefabrication, theseare affordable, and reduce structure time, but can be used only in one- way gaugingconstructions,andmustbe supportedbyshaftsand/orfixedwalls.



Cement-isthemostimportantlistcomponentwhichdeterminesthefresh&toughened parcels of concrete. Ordinary Portland cement of 43 grade(sp graveness-3.5)attestingtoIS12269-1987isusedinthis experimentalprogram.

B. Fineaggregate-Thesummationswhicharepassingthrough4.75mmsizeISsieveand contains only that much of coarse grained accoutrements are permitted by thespecifications are generalized as fine summations. Fine summations attesting to zoneII end through4.75 mm IS sieve(sp graveness-2.52) is used in this

experimentalprograms.

C. Coarse aggregate - The summations which are retained on4.75 mm size IS sieveand contains only finer accoutrements are generalized as coarse summations. Coarsetotal passing through 12 mm sieve and retained on 10 mm sieve(graveness-2.63) areusedinthis experimentalprogramme.

D. Steel - The sword is fabricated in two form- meshed layers for side support andslant crossbars for perpendicular support of the balls.E. Plastic spheres The plasticspheresare the concaveballswhicharemade ofplastic accoutrements.

II. METEDOLOGY

DESIGNANDANALYSISINLABORATORY
DESIGNANDANALYSISINSTAADPROSOFTWARE
PLAN
3DPLAN ANDBENDINGSTRESSOFSLAB
BENDINGANDDISPLACEMENT
RESULT
CONCLUSION

III. RESULT

Inthattrialsetupthatthebubblesundeck(nonstop)isreducedthevolumeofconcrete so that weight of arbor eventually drop. contemporaneously the cargocarrying capacityhasalsoincreaseascompare toconventionalarbor.But thearrangements of the bubbles are effect on the load carrying capacity of the arbor, inindispensable arrangement of bubbles are increase the load carrying capacity thanconventional arbor but lower than nonstop bubble sun deck slab.Simultaneously,bubble sundeck arbor has ameliorate the pliant ness property of arbor, similar asconventional slab is less redirect than bubble sundeck arbor, and volume of bubbles inarbor also affect on the this elasticity property.Weight reduce on is the importantfactorissetupinbubblesundeckarbor.Weightofthecovalentslabis further thanthebubble sundeckarbor.

IV. COCLUSION

Theliteratureonthebubbledeckslabhasreviewed. Fromtheliterature, itisclearthatvoided slab is very common in olden days and it is improving day by day and atpresent bubble deck are effective in load carrying capacity shear capacity, flexuralcapacity, fire resistant and moreover we can reduce the weight and increase the spanof the slab. Bubble deck slab has not got widespread in India because most of thedesign is based on the DIN coal provision and lack of BIS codes and specificationsregardingtheuseoftechnologywhichisdiscussedonlyinIRCSP64-2005,meantfor bridge superstructures. It will come into the competition in India like the pre-stressed concrete, which is using almost all the metro, tall structures, and bridges a lotnowadaysbutnotpopularbefore.

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